The information age and its effects on NHS prescribing decisions

Darrin Baines MSc, PhD

In our series on the history of prescribing policy, Professor Darrin Baines looks at the impact the introduction of computers, and the consequent ability to record prescribing trends, had on the choices GPs made.

KEY EVENTS

- 1978 – RCGP established a working party on computers. Committee defined desirable features of general practice computer systems.
- 1988 – Prescribing Analysis and CosT (PACT) data launched. For the first time, monthly prescribing reports on drug choice became available for every GP.
- 1990 – Prescribing Research Unit (PRU) established. The unit produced publications and guidance on auditing and improving prescribing in primary care.
- 1990 – MeReC Bulletin first published. The Bulletin provided advice and information on drug and therapeutic choices as well as costs.

Published in January 1957, the first comprehensive study of NHS prescribing was undertaken by JP Martin of the London School of Economics.[1] In a historical background to his book, Mr Martin argued that the period 1900–48 was 'epoch making' because of the introduction of the National Insurance Scheme (NIS), which both raised the status of general practitioners and created a large scale administrative machine for supplying medicines. The procedures used to limit drug spending under the NIS were primarily centred around Ministry of Health visits to high cost prescribers, the provision of a national formulary and the goodwill of doctors.[2] Because of a lack of comprehensive and regular prescribing data, little could be done to control the ways in which all general practitioners prescribed. This situation remained unchanged until the introduction of Prescribing Analysis and CosT (PACT) data in the mid-1980s, when the 'information age' impacted on medicines management in NHS primary care.

Computing power

Throughout every part of modern life, in every industry, in all aspects of daily being, the 'information age' came about due to rapid developments in computing power. In July 1978, the RCGP Working Party on Computers in Primary Care met for the first time. Chaired by Dr CR Kay, the group worked to define the desirable features of a general practice computer system. Publishing its final report in 1982, the group suggested that manual practice information systems were highly limited, particularly in regard to patient records.[3] In contrast, a properly designed computer system could help record patient data, manage appointments and improve the processing of data.

Although prescribing received little attention in the report, chapter three mentioned that 'minicomputers' could: help control repeat prescriptions, contain information on drugs such as interactions and prices, and print out prescriptions. However, the report concluded that: 'some general practitioners are interested in machines and gadgets. Many are not'. Indeed, 'only a small minority have a clear idea of the revolution in office procedures which is looming, and very few have so far seen or used a computer in practice'. Therefore, until the use of computing power became widespread, the benefits to information management and prescribing practice would not be realised.

Monthly reports on drug choice

Although they held great promise, practice-based computers were unable to provide the NHS with a picture of prescribing patterns and costs because they were not all linked. In 1977, the Tricker Report recommended that a large mainframe computer should be employed to collect and process information on all prescriptions issued in primary care.[4] With the

subsequent launch of the PACT system in August 1988, monthly reports on drug choice became available for every GP.[5] This led to a national revolution in prescribing cost control, with a wide range of PACT-based prescribing management tools becoming available. For instance, routinely produced PACT data allowed the government to introduce prescribing budgets under the auspices of the fundholding and indicative prescribing schemes.[6]

Cost concerns

Pharmaceutical, then prescribing, advisers were employed in most areas to advise practices on their prescribing behaviour using knowledge gained from PACT.[7] As costs were a major concern, the majority of advisers focused on increasing generic prescribing rates, which was seen as a useful strategy for quickly reducing prescribing spends. Evidence suggests that fundholding doctors frequently used this strategy to create surpluses on their cash-limited prescribing budgets, often with the support of newly employed prescribing advisers.[8] As the fundholding scheme provided a substantial management allowance that covered computing costs, the most advanced practitioners were probably controlling their prescribing patterns and costs using both practice-generated and PACT data.

Not only did the introduction of PACT impact upon prescribing behaviour inside of practices, but academics and specialist advisers also used this new source of information to suggest possible policy directions. Prior to the introduction of the PACT system, the RCGP published the results of a study led by Conrad Harris and Brian Jarman that examined ways in which information could be used to improve prescribing habits.[9] The study team sent a random sample of London GPs an information pack about their prescribing. The study found that better data could lead to lower costs. However, analysis suggested that older family doctors increased their generic prescribing rates the most. In response to such positive findings, in 1990 the Prescribing Research Unit (PRU) was established by the Department of Health to conduct research into prescribing practice. Led by Conrad Harris, the PRU produced a significant and influential body of work that helped improve the understanding of prescribing behaviour, particularly based upon PACT data. In 1990, the PRU published its guide to the analysis of prescribing in general practice.[10] This widely read booklet contained information on using PACT data in audit and research, and was one of the few information guides available to the growing number of prescribing advisers being employed locally by NHS health authorities.

A year after its report on computers in general practice was published, the RCGP identified prescribing as a particular area needing attention. In response, an RCGP Prescribing Fellowship was proposed. In December 1986, the RCGP Scottish Council appointed its own fellow for a period of three years. In November 1991, the RCGP published a review of prescribing in general practice by the Prescribing Fellow in Scotland, JD Gilleghan.[11]

Variations in prescribing

The Occasional Paper contained 21 themed chapters, with each containing its own recommendations. Among the chapters, the following were included: prescribing costs, peer influence, prescription writing, repeats, formularies, computers, pharmacy, the patient and audit. The choice of these chapters reflected the importance of GPs as central in the prescribing process, with an emphasis on their education, knowledge and support. In chapter one, Dr Gilleghan reported that there were still wide variations in prescribing rates and costs between practitioners. Although much research had been done, he commented that there had been 'much speculation, criticism and advice'. However, he noted, 'It is important that every general practitioner should know his own prescribing rate and costs, and consider whether he is average in these rates or divergent'.

Realistic prescribing

Based upon thinking in a previous RCGP Occasional Paper, Dr Gilleghan suggested that 'rational prescribing' is 'prescribing as taught in medical schools and the type doctors are supposed to master but is concerned less with the patient as a

human being and more to do with the fate of the drug within the patient'. In contrast, 'realistic prescribing' is 'more appropriate to general practice as it combined the pharmacological approach with insight into the social and psychological complexities of ordinary people'. Therefore, the information revolution could be seen as stimulating developments in realistic prescribing because practice computers and PACT data affected drug choice for ordinary people rather than the medical education of the prescribers themselves. As he argued that 'divergent' prescribers should self-audit and be given incentives to move back towards the average, Gilleghan's work suggested that realistic prescribing was a form of 'regression to the mean' rather than an attempt to maximise benefits within existing budgets. In other words, for the realistic prescriber pursuing averages in prescribing data may have been more important than choosing drugs based upon clinical knowledge of their effects. Therefore, there was a danger that PACT data would encourage prescribers, prescribing advisers and NHS managers to focus on group norms rather than professional prescribing decisions.

With a growing awareness that prescribing could be improved in ways other than suggested by PACT data, during the early 1990s other measures were also put in place to provide objective prescribing support and advice. One of these was the establishment of the Medicines Resource Centre (MeReC) in Liverpool by the Department of Health.[12] MeReC's aim was to provide objective professional advice and information on medicinal products and matters relating to prescribing practice. Two publications, the Bulletin and the Briefing, were developed to encourage rational, safe and cost-effective prescribing. The MeReC Bulletin was first published in June 1990. It was initially distributed free of charge to practices, medical advisers within Family Health Services Authorities, and regional medical and pharmaceutical officers. The bulletin provided advice and information on drug and therapeutic choices as well as costs. A second, less frequent but more detailed publication called the MeReC Briefing was originally produced for medical advisers to aid and to supplement their discussions on prescribing matters with GPs. In 1996, MeReC Publications were incorporated into the National Prescribing Centre, which took over their publication. However, the MeReC name was retained, as its reputation and loyal readership had been established.

As the information era was a major stimulation to innovation in approaches to the management of prescribing, the measures put in place during the late-1980s and early-1990s became the mainstay of prescribing policy once the Labour party came into power in 1997. However, one main change resulting from the introduction of PACT data – the increasing involvement of pharmacists in medicines management – would receive even more attention after the millennium when the government gave community pharmacists greater incentives to become involved in the rational management of patient medicines.[13]

References

1. Martin JP. *Social aspect of prescribing*. London: William Heinemann Ltd, 1957.
2. Baines D. From the NIS to the NHS via the Floating Sixpence. *Prescriber* 2013;24:47–9.
3. Royal College of General Practitioners. *Computers in primary care: Report of the computer working party*. 1982. London: RCGP.
4. Tricker RI. *Report of the inquiry into the Prescription Pricing Authority*. London: HMSO, 1997.
5. Baines D. Recommendations from the Tricker and Clothier reports. *Prescriber* 2014;25:32–4.
6. Baines D. Drug budgets and the strengthening of the PPRS. *Prescriber* 2014;25:20–3.
7. Baines D, *et al*. A survey of English NHS prescribing advisors' roles, and their views on improving prescribing in the new NHS. *Pharma J* 2000;263:557–9.
8. Baines D, *et al*. Prescribing, budgets and fundholding in general practice. London: Office of Health Economics, 1997.
9. Harris CM, *et al*. *Prescribing – A suitable case for treatment*. London: RCGP, 1984.
10. Harris CM, *et al*. *The analysis of prescribing in general practice: a guide to audit and research*. Leeds: PRU, 1990.
11. Gilleghan JD. *Prescribing in general practice*. London: RCGP, 1991.
12. MeReC. MeReC Bulletin. Liverpool: NPC 2000;11(12).
13. Department of Health. *Pharmacy in the future: implementing the NHS Plan*. London: DoH, 2000.

Professor Darrin Baines, Universtiy of Coventry

Share your views

If you have any issues you would like to air with your colleagues or comments on articles published in *Prescriber,* the editor would be pleased to receive them and, if appropriate, publish them on our forum page. Please send your comments to:

The editor, *Prescriber,* The Atrium, Southern Gate, Chichester, West Sussex PO19 8SQ, or e-mail to prescriber@wiley.com